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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* MICHEL A. RIOU, DAVID B. LARSON,  
MARTIN G. ROCKWELL, and DAVID R. CHRISTMANN

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Appeal 2009-003276  
Application 10/698,511  
Technology Center 2800

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Decided: September 14, 2009

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Before BRADLEY R. GARRIS, CHUNG K. PAK, and  
PETER F. KRATZ, *Administrative Patent Judges*.

PAK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision refusing to allow claims 1 through 14, 17 through 22, and 27 through 43, the only claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

#### STATEMENT OF THE CASE

The subject matter on appeal is directed to a printing system having an ink drying device and a method of using the same (*see, e.g.*, claims 1, 27, and 30). Details of the appealed subject matter are recited in independent claims 1, 27, and 30 reproduced from the Claims Appendix to the Appeal Brief (“App. Br.”), filed February 20, 2008:

1. A printing system comprising:

an ink dispenser configured to deposit ink upon a print medium; and

a condenser configured to condense vapor into a condensate;

a receptacle configured to collect the condensate, wherein the receptacle is perforated to permit a portion of the condensate to evaporate, wherein the receptacle is removably coupled to a remainder of the system and wherein the receptacle includes:

an inlet through which the condensate flows into the receptacle; and

a closing portion movable between an inlet open position and an inlet closing position.

27. A printing system comprising:

means for depositing ink upon a print medium;

means for condensing vapor to form a condensate; and

means for storing the condensate, wherein the means for storing

includes an inlet and means for automatically occluding the inlet when disconnected from a remainder of the printing system.

30. A method of printing ink upon a medium, the method comprising:

depositing ink upon the medium;

heating the deposited ink to create a vapor;

condensing the vapor into a condensate;

collecting the condensate in a first receptacle; and

absorbing at least a portion of the condensate into a first absorption member within the first receptacle.

The Specification describes the claimed “receptacle” as a temporary storage container configured to receive condensate from the condensate collection part of a condensing chamber (Spec. 6 and 7). *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (The Specification “acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.”). The Specification also describes the claimed “means for storing condensate” as corresponding to the interchangeable storage subsystems comprising, *inter alia*, receptacles having perforations, fluid couplers, and absorption members described at pages 6 through 8 of the Specification. *In re Donaldson Co.*, 16 F.3d 1189, 1193-94 (Fed. Cir. 1994) (*en banc*) (When a claim employs a means-plus-function language to define an element, 35 U.S.C. § 112, ¶ 6, requires the Examiner to “look to the specification and interpret that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure.”)

The Examiner relies on the following evidence to establish unpatentability of the claims on appeal (Examiner's Answers ("Ans."), mailed June 17, 2008, 2-3):

Shin	US 6,085,055	Jul. 4, 2000
Anderson	US 6,176,563 B1	Jan. 23, 2001
Hirabayashi	US 6,203,138 B1	Mar. 20, 2001
Azar	US 6,269,002 B1	Jul. 31, 2001
Nakazawa	US 6,281,911 B1	Aug. 28, 2001
Igval	US 6,357,854 B1	Mar. 19, 2002
Brinkly	US 6,397,488 B1	Jun. 4, 2002
Sakai	US 6,512,900 B2	Jan. 28, 2003

Appellants request review of the following Examiner's rejections (App. Br. 4-5 and Ans. 2):

1. Claims 1, 6, 10, 12, 13, 18 through 20, 22, 27 through 30, 33 through 36, 39, and 43 under 35 U.S.C. § 103(a) as unpatentable over the combined disclosures of Brinkly and Nakazawa;

2. Claims 2 through 4, 7 through 9, 21, 31, and 32 under 35 U.S.C. § 103(a) as unpatentable over the combined disclosures of Brinkly, Nakazawa, and Anderson;

3. Claim 5 under 35 U.S.C. § 103(a) as unpatentable over the combined disclosures of Brinkly, Nakazawa, Anderson, and Shin;

4. Claims 11 and 38 under 35 U.S.C. § 103(a) as unpatentable over the combined disclosures of Brinkly, Nakazawa, and Sakai;

5. Claim 14 under 35 U.S.C. § 103(a) as unpatentable over the combined disclosures of Brinkly, Nakazawa, and Hirabayashi;

6. Claims 17 and 37 under 35 U.S.C. § 103(a) as unpatentable over the combined disclosures of Brinkly, Nakazawa, and Igval; and

7. Claims 40 through 42 under 35 U.S.C. § 103(a) as unpatentable over the combined disclosures of Brinkly, Nakazawa, Anderson, and Azar.

In rejecting the claims on appeal under 35 U.S.C. § 103, the Examiner relies on Brinkly to show a printing system and a method of using the printing system, wherein the printing system includes a print engine 22 corresponding to the claimed ink dispenser for depositing ink upon print medium, an accumulator 102 corresponding to a condenser for condensing vapor into a condensate, a vessel 116 corresponding to a receptacle (Ans. 3-6). The Examiner admits that Brinkly does not teach, *inter alia*, that its receptacle has perforations, an adsorption member, and particular opening and closing means for removably coupling the receptacle to a remainder of the system as recited in claims 1, 27, and 30 (Ans. 4, 6, and 7).

To remedy the above deficiencies, the Examiner relies on Nakazawa to show the above missing features (*id.*). According to the Examiner (Ans. 4, 6, and 7):

Nakazawa et al. disclose a receptacle (ink cartridge 2) that is perforated to permit a portion of waste ink to evaporate (col. 10, lines 33-48), wherein the receptacle is removably coupled to a remainder of the system (col. 12, lines 6-10), and that the receptacle includes a closing poertion (take-in port rubber 522) that is movable between an inlet open position and an inlet closing position (col. 5, lines 53-58 and Fig. 5).

...

Nakazawa et al. disclose means for storing (ink cartridge 2) that includes an inlet (insertion hole 48a) and means (take-in port rubber 522) for automatically occluding the inlet when disconnected from a remainder of the printing system (col. 12, lines 1-28 and Fig. 5).

...

Nakazawa et al. disclose the step of absorbing at least a portion of waste liquid into a first absorption member (col. 6, lines 19-23) within a first receptacle.

The Examiner then goes on to conclude (e.g., Ans. 4, 6, and 7) (emphasis added) that:

Therefore, at the time of [the] invention, it would have been obvious to a person of ordinary skill in the art to utilize the cartridge disclosed by Nakazawa et al. into Brinkly's invention so as to perform the step of absorbing the condensate. One motivation for doing so, as taught by Nakazawa et al., is to provide *an ink cartridge* with a waste ink absorbing function that can be recycled simply and easily.

The Examiner also relies on Anderson, Shin, Sakai, Hirabayashi, Igval, and Azar only for features in certain dependent claims (Ans. 8-16).

Appellants traverse the Examiner's § 103 rejections. Appellants contend that the combination of Brinkly and Nakazawa as suggested by the Examiner would not have led one of ordinary skill in the art to the system and method recited in claims 1, 27, and 30 (e.g., App. Br. 7-11 and Reply Brief ("Reply Br."), filed August 18, 2008, 1-3).

#### ISSUE AND CONCLUSION

Have Appellants identified reversible error in the Examiner's determination that the collective teachings of Brinkly and Nakazawa would have led one of ordinary skill in the art to the subject matter recited in claims 1, 27, and 30 within the meaning of 35 U.S.C. § 103(a)?

On this record, we answer this question in the affirmative.

FINDINGS OF FACT (“FF”)

1. The Examiner finds, and Appellants do not dispute, that Brinkly teaches a printing system and a method of using the printing system, wherein the printing system includes a print engine 22 corresponding to the claimed ink dispenser for depositing ink upon print medium, an accumulator 102 corresponding to a condenser for condensing vapor into a condensate, a vessel 116 corresponding to a receptacle. (*Compare* Ans. 3-6 with App. Br. 7-11 and Reply Br. 1-3).

2. The Examiner acknowledges that Brinkly does not teach employing, *inter alia*, the removable condensate storing receptacle having perforations recited in claim 1, the means for storing condensate recited in claim 27, and the step of “absorbing at least a portion of the condensate into a first absorption member within the first receptacle” recited in claim 30 (Ans. 4, 6, and 7).

3. Nakazawa teaches “an ink cartridge for use as *an ink supply source* in an ink recording apparatus such as an ink jet printer or the like and, in particular, an ink cartridge having a waste ink absorbing function” (col. 1, ll. 6-9) (emphasis added).

4. Nakazawa teaches that the “waste ink absorbing function” was conventionally carried out by an ink absorbing member which used to absorb “the ink that leaks out from the ink guide needle (ink supply needle) which is inserted into the ink cartridge.” (col. 1, ll. 28-31)

5. Nakazawa teaches the drawbacks of the conventional waste ink absorbing member design in the ink cartridge and recommends a novel ink



cartridge with a waste ink absorbing function comprising a cartridge case for storing both an ink bag containing ink and a division room partly made of a plastic film containing a waste ink absorbing member for absorbing waste ink (col. 2, ll. 1-63).

6. Nakazawa teaches that “simply by cutting or peeling off the plastic film, the waste ink absorbing member disposed within the division room can be replaced” (col. 2, ll. 65-67 and col. 6, ll. 19-23).

7. Nakazawa teaches that its ink cartridge is removably mounted to a cartridge mounting portion having an ink supply needle and a waste liquid needle (col. 5, ll. 45-57)

8. Nakazawa teaches that the division room containing the waste ink absorbing member has a ventilation hole to exhaust air therefrom to avoid lowering of the waste ink absorbing performance and a closing means (a take-in port rubber 522) for closing an inlet (48a) left open by removing the waste liquid needle connected to the division room (col. 10, ll. 33-49, col. 12, ll. 1-28, and Fig. 5).

9. The Examiner relies on Anderson, Shin, Sakai, Hirabayashi, Igval, and Azar only for features in certain dependent claims (Ans. 8-16).

#### PRINCIPLES OF LAW

Under 35 U.S.C. § 103(a), “a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418-19 (2007). The Examiner needs to identify a reason that would have prompted one of ordinary skill in the art to combine the

elements to arrive at the claimed subject matter. *Id.* "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.'" *KSR* at 417-18, *quoting In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

The Examiner has the initial burden of establishing a *prima facie* case of obviousness under 35 U.S.C. § 103. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992) ("[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.").

## ANALYSIS

As correctly pointed out by Appellants at page 9 of the Appeal Brief, the combination of Brinkly and Nakazawa suggested by the Examiner would not have resulted in the system and method recited in claims 1, 27, and 30. On this record, the Examiner has not supplied any reason or motivation that would have prompted one of ordinary skill in the art to employ Nakazawa's ink cartridge features, including a division room having a perforation and a waste ink absorbing member for absorbing the ink leaked from an ink supply needle, to modify or improve Brinkly's vessel for receiving vapor condensate from a vapor condensing accumulator within the meaning of 35 U.S.C. § 103(a). To obtain the advantage taught by Nakazawa and relied upon by the Examiner, one of ordinary skill in the art would have been led to modify or improve Brinkly's ink dispenser system (ink supply source), not Brinkly's ink drying system comprising a vessel for receiving vapor condensate from a vapor condensing accumulator. As indicated *supra*,

Nakazawa teaches employing, in its ink cartridge (an ink supply system), a particularly designed division room having a perforation and a waste ink absorbing member for absorbing the ink leaked from an ink supply needle in order to render the waste ink absorbing member easily and economically replaceable. Nakazawa does not teach that its ink cartridge features are useful for Brinkly's ink drying system comprising a vessel for receiving vapor condensate from a vapor condensing accumulator. The Examiner relies on Anderson, Shin, Sakai, Hirabayashi, Igval, and Azar for certain dependent claim features, rather than to remedy the above deficiencies of Brinkly and Nakazawa.

Accordingly, we concur with Appellants that the Examiner has not established a prima facie case of obviousness regarding the claims on appeal within the meaning of 35 U.S.C. § 103(a).

#### CONCLUSION

Appellants have identified reversible error in the Examiner's obviousness determination. The decision of the Examiner rejecting the claims on appeal is reversed.

#### REVERSED

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